

What is claimed is:

1. An enclosure for storing at least one storage device, comprising:  
an enclosure chassis;  
a mounting surface coupled to the enclosure chassis, the mounting surface configured to receive a storage device carrier and having a first layer and a second layer;  
and  
a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface.
2. The apparatus according to claim 1, further comprising a receiver secured to the mounting surface and configured to retain a first storage device carrier substantially perpendicular to the mounting surface.
3. The apparatus according to claim 1, wherein the mounting surface is disposed horizontally to retain a storage device carrier in an orientation in which a storage device may be received with a disk of the storage device mounted vertically with respect to the mounting surface.
4. The apparatus according to claim 2, further comprising a second receiver secured to the mounting surface, the second receiver configured to retain a second storage device carrier.
5. The apparatus according to claim 4, wherein the mounting surface is configured to receive the first storage device carrier on one side of the mounting surface and the second storage device carrier on an opposite side of the mounting surface.

6. The apparatus according to claim 4, wherein the mounting surface is disposed to receive the first storage device carrier on one side of the mounting surface and the second storage device carrier on a same side of the mounting surface as the first storage device.

7. The apparatus according to claim 1, further comprising a viscoelastic layer disposed between a first layer and a second layer of the enclosure chassis.

8. The apparatus of claim 1, wherein the storage device is a disk drive.

9. A system for storing at least one storage device, comprising:  
an enclosure chassis;  
a mounting surface coupled to the enclosure chassis, the mounting surface having a first layer and a second layer and a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface;  
a storage device carrier configured to retain a storage device therein; and  
a receiver secured to the mounting surface, the receiver configured to receive the storage device carrier.

10. The system according to claim 9, wherein the storage device carrier further comprises a clip-on spring configured to resiliently couple the storage device carrier to the receiver.

11. The system according to claim 9, wherein the mounting surface is disposed horizontally to retain the storage device carrier in an orientation in which a storage device may be received with a disk of the storage device mounted vertically with respect to the mounting surface.

12. The system according to claim 9, further comprising a second receiver secured to the mounting surface, the second receiver configured to retain a second storage device carrier containing a second storage device.

13. The system according to claim 12, wherein the storage device carrier is mounted on one side of the mounting surface, and the second storage device carrier is mounted to an opposite side of the mounting surface.

14. The system according to claim 12, wherein the storage device carrier is mounted on one side of the mounting surface, and the second storage device carrier is mounted on the same side of the mounting surface.

15. The system according to claim 9, further comprising a viscoelastic layer disposed between a first layer and a second layer of the enclosure chassis.

16. The system of claim 9, wherein the storage device is a disk drive. .

17. The system of claim 10, wherein the clip-on spring comprises at least three layers including at least one viscoelastic layer.

18. A system for storing at least one storage device, comprising:

an enclosure chassis;

a mounting surface coupled to the enclosure chassis, the mounting surface having a first layer and a second layer and a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface;

a storage device carrier including a bezel, the storage device carrier configured to retain a storage device therein, the storage device having a storage device carrier interface; and

a key removably secured to at least one of two positions on the bezel, such that placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis.

19. The system of claim 18, further comprising at least one clip-on spring coupled to the storage device carrier, the clip-on spring configured to flexibly couple the storage device carrier to the mounting surface.

20. The system of claim 19, wherein the clip-on spring comprises at least three layers including at least one viscoelastic layer.

21. A method for reducing vibration originating from at least one storage device, comprising the steps of:

providing an enclosure chassis configured to store at least one storage device;  
providing a mounting surface coupled to the enclosure chassis, the mounting surface configured for receiving a storage device carrier;  
providing a first layer on the mounting surface;  
providing a second layer on the mounting surface; and  
providing a viscoelastic layer disposed between the first and second layer of the mounting surface for reducing vibration propagation throughout the mounting surface.

22. The method according to claim 21, further comprising the steps of:

providing a first layer on the enclosure chassis;  
providing a second layer on the enclosure chassis; and  
providing a viscoelastic layer disposed between the first and second layer of the enclosure chassis, for reducing vibration propagation throughout the enclosure chassis.

23. The method according to claim 21, further comprising the steps of:

providing a storage device carrier for retaining a storage device;  
securing a receiver to the mounting surface for receiving the storage device carrier; and  
coupling at least one clip-on damped spring to the storage device carrier, for resiliently coupling the storage device carrier to the receiver.

24. An apparatus for reducing vibration originating from at least one storage device, comprising:

an enclosure chassis configured to store at least one storage device; and  
a mounting surface coupled to the enclosure chassis, the mounting surface configured to receive a storage device carrier and having a damping means for damping the vibrational energy generated by the storage device and received by the mounting surface.

25. The apparatus according to claim 24, wherein the damping means comprises a first layer, a second layer, and a viscoelastic layer between the first layer and the second layer.

26. The apparatus according to claim 25, wherein the viscoelastic layer is a damping adhesive.

27. The apparatus according to claim 24, further comprising a receiving means coupled to the mounting surface for receiving a storage device carrier onto the mounting surface.

28. The apparatus according to claim 24, wherein the storage device carrier comprises:

a bezel secured to the storage device carrier and configured to lock the drive carrier within the enclosure; and

a keying means, attached to the bezel, for preventing the storage device carrier, with one type of interface, from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis.

29. The apparatus according to claim 28, wherein the keying means for keying a storage device carrier comprises a key removably secured to at least one of two positions on the bezel, and wherein the placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis.

30. The apparatus according to claim 28, wherein the keying means for keying a storage device carrier comprises a groove in the enclosure chassis configured to receive the key.

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